



---

# GLAST Monthly PSR

---

Software / Simulation

*December 2003*

***Erik Andrews***  
*Software Systems*

# - 1



# SC Flight Software Status

26 November 2003



## ► **Accomplishments**

- *SEI/CMM:*
  - *Completed CMM Assessment Review*
  - *Approved as CMM - Level 3*
- *Supported ISMP Requirements Riposte*
- *Researching Design-By-Contract SW Dev philosophy*

## ► **Plans**

- *Flight SW Process Audit - 01 Dec*
- *ISMP Requirements Reviews Ongoing*
- *Flight SW Code Review – Beginning of CWTs*
  - *FSW Code Walk Thru Schedule Continuing Through Spring '04*

## ► **Issues**

- *Still desire Swift code*
- *DBC \*not\* inherited from Swift.*
  - *A good methodology ... must discover SAI's experience with it.*



# Software – LAT FSW

---



## ► **Reviews**

- *Quick Look Review (QLR) held Nov. 21*
  - *Comments and Feedback Received from Review Team*
  - *Review and Implementation of Recommendations commencing*

## ► **Recommendations (In A Nutshell)**

- *Code Metrics – No more ‘apples’ to ‘oranges’*
  - *Come to an agreement on what are definitions*
- *Requirements*
  - *Requirements for FSW in the SRS are at a high level*
  - *Lower Level Requirements are in ICDs and Design Docs*
  - *Need to be included to create a credible test of LAT FSW*
- *Schedule (margin & detail)*
  - *The schedule detail (presented) is inadequate to track. Identify approach to solve this.*
  - *Schedule margin appears limited. Look for ways to build additional margin in.*
- *Test Process*
  - *Implement a test process that is both rigorous and complete*



# Issues/Problems

---

## ► **LAT FSW**

- *Implementation of the QLR Recommendations will take time.*
- *Testing of builds and with adequate formality remains a concern.*
  - *Will be addressed as part of the QLR committee recommendations.*

## ► **SC FSW**

- *Technical: None.*
- *ISMP: Ongoing Project/Spectrum action to work requirements.*

## ► **GBM FSW Status**

- *Application Software being developed and unit tested.*
- *SwRI supporting MSFC with Application Level FSW.*
- *Delivery of the SDIS (for/to SwRI) will aid in their testing capability.*



# Upcoming Events

---

## ► **Spacecraft**

- 12/03 – Spring '04: Code Walk Thru Reviews for FSW & GNC (FSW)

## ► **LAT**

- EM2 FSW Peer Design Review – date *tbs.*
- EM2 (next) Version of FSW Requirements Spec planned for 11/03.
- ISIS delivery to Spectrum: 6/04.

## ► **GBM**

- Build 1 Complete – Feb 2004
- ISIS delivery to Spectrum: 5/04(?)



# SIIS / SDIS Simulators Status

---



## ► **Definition of Simulators**

- *SIIS – Spacecraft-to-Instrument Interface Simulator (no change)*
- *SDIS – Spacecraft Data Interface Simulator (aka. SIIS-lite)*

## ► **For GBM:**

- *SIIS is delivered to MSFC (5/03).*
- *SDIS: Spectrum working this. Priority is below that of LAT SIIS/SDIS deliveries.*

## ► **For LAT:**

- *SDIS is at NRL (6/03).*
- *SIIS and SLITH (SIIS-LAT Interface Test Harness) in work at Spectrum.*
  - *Highest Priority in the Simulation efforts.*
  - *Will include LVDS Discretes and 'upgraded' 1 PPS*



# Instrument-Spacecraft Interface Simulator Status

---



## ► **Spectrum**

- *Provided sketch of their planned uses for the ISIS during their HB and SC I&T phases.*

## ► **LAT ISIS**

- *Mike Huffer lead.*
- *Developing the plan for LAT ISIS build, integration, and test.*
  - *Details of plan/approach to be addressed next week in meetings at SLAC.*
- *SLAC reviewing FSW requirements to determine what requirements are to be included in the delivery.*

## ► **GBM ISIS**

- *Bill Paciesas lead.*
- *Developing the plan for GBM ISIS build, integration, test, and delivery to Spectrum Astro.*
- *Architecture for GBM ISIS presented at the Ground Systems Peer Review. Working the Requirements to be satisfied. For software, this means 'Build 1'.*



# Rolling Wave Schedule

---



- ▶ ***Included with SC and Instrument Rolling Wave...***